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NPIC/TSSG/DED-1216-68
27 May 1968

MEMORANDUM FOR: Chief, Research & Development Branch II, DED

SUBJECT : Improved Rear Projection Screen

1. On Friday, 24 May 1968, [redacted] and I attended a meeting at the Washington Office of Corning Glass Works, 1629 K Street, N.W. Corning personnel from Raleigh, North Carolina attending this meeting were: [redacted] The purpose of the meeting was to discuss certain technical details pertaining to the pending follow-on contract for development of an Improved Rear Projection Screen. STAT STAT STAT

2. The first item discussed was the test results pertaining to some German-made Rear Projection Screens (Marata Disks). Corning presented a documentation of their test results on this material (Attachment 1). [redacted] summarized the results obtained on a sample of this material by our Exploratory Laboratory. Although certain of the properties tested were superior to those of the best American-made screens, it was generally agreed that it was inferior in some properties. Neither Corning nor our Exploratory Laboratory had determined the Modulation Transfer Function of the German-made screens. (Exploratory Laboratory memorandum--NPIC/TSSG/TPD/EL-632-68 refers). STAT

3. [redacted] noted that there was little chance of further improvement in the discrete-particle type of screen. Lenticular screens showed some promise, but the cost of "drawing" the glass would increase the final price of the screen. They favored pursuing the development of a lenticular screen and wanted to know if there would be a market for a higher priced material. I stated that if the material had outstanding qualities; there was a good chance that it would be accepted even with the increased cost. However, I advised that I would talk to the appropriate authorities, determine their feelings on this subject and convey the results during my planned visit to Raleigh during mid June. Question - How much will we pay for a 30" X 30" rear projection screen having truly outstanding properties? STAT

4. The next subject discussed was the desire for more feedback from us relative to the systems in which this improved material would be used. Dr. Megla contended that if they could view some of the rear projection devices in operation, they might gain some additional knowledge which would be of assistance in their development effort. Too, they might be able to offer

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some constructive ideas which, if applied to the system, would enhance the end results from any new screen material. I advised that I would look into the possibility of having their personnel view some of the rear projection devices. In addition, I stated that we could probably help them toward a better understanding of the physiology of seeing by recommending the best reference material. I also noted that I was trying to schedule a meeting between them and our [redacted] to discuss this subject. STAT

5. I have checked on the various rear projection viewers available in the building. They are: Richardson #705 in IAS-contact [redacted] STAT
Richardson #706 in EL/TPD-contact [redacted] ITEK in SPAD-contact [redacted] STAT
in T&E-contact [redacted]. Permission has STAT
been tentatively obtained to show the ITEK [redacted] viewers to the Corning STAT
personnel and I anticipate no trouble in obtaining permission to demonstrate the other two.

6. My recommendations in handling the requests of Corning are:

a. Advise them that a screen material having truly outstanding properties would be worth an increased price. (I do not believe we should quote an actual figure. We should ask them to estimate what the increased price would be).

b. Have [redacted] accompany me on a one-day visit to Corning at Raleigh on Tuesday, 18 June, during which he could discuss the physiology of seeing and, perhaps, offer a recommended bibliography. STAT

c. Arrange a visit for selected Corning personnel to see the rear projection viewers available here at NPIC.

7. Your comments on the above would be appreciated.

[redacted] STAT
TSSG/R&DB II

Attachment:
Technical Data on German-made Rear Projection Screens

Distribution:
Orig - Addressee
✓2 - NPIC/TSSG/DED/R&DB II files

NPIC/TSSG/DED/R&DBII/[redacted] (27 May 68) STAT

TECHNICAL DATA ON SOME GERMAN-MADE REAR PROJECTION SCREENS

Type	Axial Gain	T_{90} (%)	T_{45} (%)	Brightness Variation ±(%)	Diffuse Reflectance (%)
D6	7	62	52	81	5.0
41-FB[1]	4.7	57	44	71	4.6
61-FGN[2]	4.6	63	50	66	4.9
D8	3.7	53	40	64	4.8
BTG-6/6	2.2	48	32	43	5.0

[1]Blue Tinted

[2]Green Tinted